

BEFORE THE POLLUTION CONTROL HEARINGS BOARD
STATE OF WASHINGTON

COMMUNITY ASSOCIATION FOR)
RESTORATION OF THE ENVIRONMENT)
("CARE"),)

Appellants,)
vs.) PCHB No. O6-057

STATE OF WASHINGTON, DEPARTMENT)
OF ECOLOGY,)

Respondent.)

NORTHWEST DAIRY ASSOCIATION,)
WASHINGTON STATE DAIRY FEDERATION,)
WASHINGTON CATTLEMEN'S ASSOCIATION)
WASHINGTON CATTLE FEEDERS)
ASSOCIATION, NORTHWEST POULTRY)
INDUSTRIES COUNCIL,)

Intervenors.)

TRANSCRIPT OF PROCEEDINGS

DAY ONE

April 30, 2007
Lacey, Washington

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BE IT REMEMBERED that a hearing was held in the
above-entitled matter before the Pollution Control
Hearings Board of the State of Washington on April 30,
2007, at the Environmental Hearings Office, 4224 Sixth
Avenue Southeast, Building No. 2, Lacey, Washington.
Sitting as the Pollution Control Hearings Board
were Board Member Andrea McNamara Doyle, Presiding,
Board Chair WILLIAM H. LYNCH, and Board Member KATHLEEN
D. MIX.

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<p style="text-align: right;">Page 101</p> <p>1 opportunity to review the notes.</p> <p>2 THE WITNESS: I reviewed the notes at the</p> <p>3 time that Mike wrote them back in 2004.</p> <p>4 MR. NELSON: Thank you. No objection.</p> <p>5 MS. DOYLE: Okay. A-53 is admitted.</p> <p>6 Q I would like you to, if you would, read for us starting</p> <p>7 at "John S," the third paragraph down.</p> <p>8 A "John S. then delivered a presentation on the proposed</p> <p>9 alternatives for triggering groundwater monitoring in</p> <p>10 the general permit. The facts are: CAFOs can be one</p> <p>11 of the sources of nitrate in groundwater. Nitrate</p> <p>12 leach to groundwater once past the root zone.</p> <p>13 Washington water quality law requires a finding that a</p> <p>14 discharge will not violate water quality standards</p> <p>15 before issuing a permit."</p> <p>16 Q Stop right there for a second. Then there are four</p> <p>17 bullet points after the next sentence that are one of</p> <p>18 the proposed options in the permit, correct?</p> <p>19 A Correct.</p> <p>20 Q Have any of those conditions made it into the final</p> <p>21 permit?</p> <p>22 A The second one, lagoon monitored and certified to meet</p> <p>23 NRCS standards. We do have a lagoon liner requirement</p> <p>24 in the permit.</p> <p>25 Q Okay. But the other three, highest seasonal ground</p>	<p style="text-align: right;">Page 103</p> <p>1 "Third party."</p> <p>2 A "Third party fears drive concern over the presence of</p> <p>3 groundwater monitoring results."</p> <p>4 Q Mr. Kolosseus, I'm going to move into a slightly</p> <p>5 different line of questioning here. You've already</p> <p>6 testified that the draft permit was based, in part at</p> <p>7 least, on your review of scientific studies done by the</p> <p>8 Department of Ecology, correct?</p> <p>9 A Correct.</p> <p>10 Q And we've already identified which ones those are for</p> <p>11 the most part. I think it's Exhibit A-92, the list of</p> <p>12 Ecology assessment program studies?</p> <p>13 A Yes.</p> <p>14 Q Were there other studies that you looked at and relied</p> <p>15 upon in making your determinations?</p> <p>16 A That was the bulk of it that I remember.</p> <p>17 Q One of the studies that you relied on is Exhibit A-9;</p> <p>18 is that correct?</p> <p>19 A Yes.</p> <p>20 Q Take a look at page 19 of that document, please. And</p> <p>21 would you read number 5, please.</p> <p>22 A "Near-field monitoring of Edaleen Dairy shows that</p> <p>23 lagoon leakage is contaminating groundwater in the</p> <p>24 immediate vicinity of Edaleen lagoon. Far-field</p> <p>25 monitoring indicates that agricultural activities,</p>
<p style="text-align: right;">Page 102</p> <p>1 waters more than 10 feet below the surface, that didn't</p> <p>2 make it in?</p> <p>3 A No.</p> <p>4 Q Post harvest soil samples from land app areas have a</p> <p>5 total N of 30 ppm or less.</p> <p>6 A The 30 parts per million part isn't in the permit.</p> <p>7 Q Is not.</p> <p>8 A Is not.</p> <p>9 Q And the soil samples from the production areas having a</p> <p>10 total N of 30 ppm or less, that didn't make it either,</p> <p>11 did it?</p> <p>12 A Correct.</p> <p>13 Q If you'll turn to the third page of this document, you</p> <p>14 earlier testified about Mr. Secrist I think being</p> <p>15 connected with El Oro Cattle?</p> <p>16 A Yes.</p> <p>17 Q Can you read what Mr. Secrist says about two-thirds of</p> <p>18 the way down the page, "Willing to."</p> <p>19 A "Willing to change BMPs but no groundwater monitoring."</p> <p>20 Q Okay. And then down the very last line, where it says</p> <p>21 "Jay," would you read that, please.</p> <p>22 A "Groundwater monitoring is a bad backstop. We should</p> <p>23 test soil. Farmers know what their soil will do."</p> <p>24 Q You can stop there. Thanks. Actually, the last</p> <p>25 sentence of that, would you read that starting with</p>	<p style="text-align: right;">Page 104</p> <p>1 including land application of dairy waste, are</p> <p>2 contributing nitrate contamination to shallow</p> <p>3 groundwater. In two instances, nitrate contamination</p> <p>4 in wells exceeded the Washington State groundwater</p> <p>5 quality criteria of 10 milligrams per liter."</p> <p>6 Q Okay. Now, sir, are you also familiar with high</p> <p>7 nitrates in groundwater being linked to spontaneous</p> <p>8 abortions in humans?</p> <p>9 A Yes.</p> <p>10 Q And if you take a look at Exhibit A-12, is that one of</p> <p>11 the studies that you looked at?</p> <p>12 A I don't remember looking at this study.</p> <p>13 Q What information did you use to base your opinion that</p> <p>14 spontaneous abortions can be linked to nitrate</p> <p>15 contamination?</p> <p>16 MR. NELSON: Misstates the evidence.</p> <p>17 MS. DOYLE: Mr. Tebbutt, would you like to</p> <p>18 rephrase, please.</p> <p>19 MR. TEBBUTT: Yes.</p> <p>20 Q Did you review any studies which made that connection</p> <p>21 between spontaneous abortions and nitrates in</p> <p>22 groundwater?</p> <p>23 A I don't think I looked at those studies independently.</p> <p>24 That was from the fact sheet. I can't remember where</p> <p>25 in the fact sheet it came from. It might have been</p>

<p style="text-align: right;">Page 105</p> <p>1 from the last version of the fact sheet. I'm not sure 2 what evidence I used to cite that statement, but that's 3 in the fact sheet. 4 Q But you accepted whatever that reference was in the 5 fact sheet about that issue? 6 A Yes. 7 Q You don't challenge that today? 8 A No. 9 Q Sir, if you would take a look at Exhibit 35, please. 10 Is this the document that you reviewed in the course of 11 writing the general CAFO permit? 12 A Yes. 13 Q And did you discuss this document with anyone at the 14 Department of Ecology? 15 A John Stormon did the primary review of this document 16 and many of the other documents, so he did the primary 17 review. I also did a cursory review of these documents 18 and I'm not sure how much we discussed them together, 19 but probably at least to some degree we discussed them. 20 Q Okay. And did this document raise any concerns to you, 21 the study about groundwater contamination? 22 A I believe this one showed that there was high nitrates 23 in private wells. The difficulty was figuring out what 24 do we do in the permit about that. But it did raise 25 the issue of high nitrate levels.</p>	<p style="text-align: right;">Page 107</p> <p>1 statistically higher than in Region 1. Nitrate results 2 for Region 2 showed 21 percent of the wells exceeded 3 the MCL and 19 percent had elevated levels." 4 Q You can stop there. Thank you. 5 Would you take a look at Exhibit A-38, please. Is 6 this another study that you reviewed as part of the 7 permit development process? 8 A Yes. 9 MR. TUPPER: I'm sorry, what exhibit? 10 MR. TEBBUTT: A-38. 11 MR. TUPPER: We have that as 37. 12 MR. TEBBUTT: The Heritage College study. 13 MR. TUPPER: I am sorry. 14 MR. TEBBUTT: May I proceed, Mr. Tupper? 15 MR. TUPPER: Yes. 16 Q Sir, this was another report that you received as part 17 of CARE's comments to the Department of Ecology, 18 correct? 19 A Yes. 20 Q Is that how that document was brought to your 21 attention, do you know? 22 A Yes, I think so. 23 MR. TEBBUTT: Your Honor, I move the 24 admission of Exhibit A-38. 25 MR. LAVIGNE: No objection.</p>
<p style="text-align: right;">Page 106</p> <p>1 Q Okay. 2 MR. TEBBUTT: Your Honor, I would move A-35. 3 MR. NELSON: I don't object, Your Honor. 4 MR. TUPPER: No objection. 5 MR. LAVIGNE: No objection. 6 MS. DOYLE: A-35 is admitted. 7 Q This document was also provided with CARE's comments, 8 wasn't it? 9 A Yes. 10 Q And take a look at page 29 of that document. And if 11 you would read under "Discussion" in the second 12 paragraph where it starts "Significant," would you read 13 the first two sentences. 14 MR. TUPPER: Objection, Your Honor. The 15 document speaks for itself. This isn't an Ecology 16 document. 17 MS. DOYLE: You're asking him to read what 18 portion? 19 MR. TEBBUTT: Two sentences on page 29. 20 MS. DOYLE: It has been admitted, so I'll go 21 ahead and allow that as an efficient way to tee up your 22 question. 23 A "Significant impairment of groundwater quality was 24 evident in Region 2 where mean levels of nitrate, 25 ammonia, chloride and specific conductivity were</p>	<p style="text-align: right;">Page 108</p> <p>1 MR. TUPPER: No objection. 2 MR. NELSON: No objection. 3 MS. DOYLE: A-38 is admitted. 4 Q Sir, on page 1, it's labeled number 1, but it's 5 actually the third page of the document, under 6 "Summary," would you read for us, please, where it 7 starts "There." 8 A Which paragraph are you in? 9 Q It's that third paragraph under "Summary." 10 A [Reading] There are three major conclusions from this 11 survey. The first conclusion is that concentrations of 12 nitrate/nitrite-N are elevated in three areas of the 13 region as shown in figure 1. 14 Q Continue on, please. 15 A [Reading] The second major conclusion is that there are 16 fecal coliform present in a significant number of wells 17 in the region as shown in figure 2. The locations of 18 wells that test positive for total coliforms are in 19 areas of highest groundwater, nitrate/nitrite-N 20 concentrations. The sources of these bacteria can only 21 be animal feces. Consequently, these results suggest 22 that sources of contaminants are feedlots and/or dairy 23 operations. 24 Q And then just the very next sentence, please. 25 A [Reading] The third conclusion we have reached is that</p>

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TRANSCRIPT OF PROCEEDINGS

DAY FIVE

May 4, 2007
Lacey, Washington

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were Board Members ANDREA McNAMARA DOYLE, Presiding; Board
Chair WILLIAM H. LYNCH; and Board Member KATHLEEN MIX.

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<p style="text-align: right;">Page 1047</p> <p>1 transformations, so we need to work with those</p> <p>2 forms that are most readily available to the plant</p> <p>3 and have environmental implication.</p> <p>4 Q And why would nitrates have more environmental</p> <p>5 implication than other forms of nitrogen?</p> <p>6 A Well, nitrate in particular, as we know, it's</p> <p>7 implicated as an issue with regard to health, and</p> <p>8 there is an EPA standard of 10 PPM for that in</p> <p>9 groundwater, particularly drinking water.</p> <p>10 Q So there's one for nitrates but not other forms of</p> <p>11 nitrogen, is what you're saying?</p> <p>12 A I believe there may be some triggers for some of</p> <p>13 the other forms, but I'm not exactly sure, for</p> <p>14 instance, what the ammonia level might be.</p> <p>15 Q Okay.</p> <p>16 MS. DOYLE: Did you have anything</p> <p>17 additional?</p> <p>18 MR. LYNCH: No.</p> <p>19 MS. DOYLE: Ms. Mix?</p> <p>20</p> <p>21 EXAMINATION</p> <p>22 BY MS. MIX:</p> <p>23 Q Just a couple of questions, and first a comment,</p> <p>24 Dr. Harrison. I would just like to say I really</p> <p>25 appreciate that tie you're wearing today that's</p>	<p style="text-align: right;">Page 1049</p> <p>1 state-specific information.</p> <p>2 So our state actually has a number of times</p> <p>3 made revisions to that 590 in the last half a dozen</p> <p>4 years to make it more state-specific.</p> <p>5 Q Okay. Then if you could turn to Exhibit 55 in one</p> <p>6 of the black notebooks, this is one that you</p> <p>7 referred to yesterday dealing with post-harvest</p> <p>8 soil nitrate testing.</p> <p>9 A Yes.</p> <p>10 Q How does this relate to 590, first off?</p> <p>11 A Okay. As I was sharing earlier, within the overall</p> <p>12 system of managing nutrients, we've got the</p> <p>13 standards and then there will be specifications and</p> <p>14 so forth. Oftentimes in the NRCS standards and</p> <p>15 specifications, they'll refer to other guidance.</p> <p>16 For taking samples, soil samples, in the fall</p> <p>17 and interpreting those results, this is our</p> <p>18 guidance for the Pacific Northwest, particularly</p> <p>19 west of the Cascades, and with particular guidance</p> <p>20 to interpret the soil tests, this will show up on</p> <p>21 page 7 and 8, and it shows up as three-tiered where</p> <p>22 you've got three different ranges of soil nitrate.</p> <p>23 Those trigger three different sets of management</p> <p>24 changes, and they're laid out for both silage corn</p> <p>25 as well as grass.</p>
<p style="text-align: right;">Page 1048</p> <p>1 covered with the big cows.</p> <p>2 A I wore my multi-species one yesterday.</p> <p>3 Q I didn't notice the multi-species one, but that one</p> <p>4 is very nice.</p> <p>5 A Thank you.</p> <p>6 MR. LYNCH: I think that's her only</p> <p>7 question.</p> <p>8 (LAUGHTER.)</p> <p>9 THE WITNESS: That was easy.</p> <p>10 Q I appreciate Mr. Tupper's set of questions on the</p> <p>11 issue of this practice 590. I think it's 590,</p> <p>12 correct? You referred to it as, quote, the biggie?</p> <p>13 A Yes.</p> <p>14 Q What is that, what's the source of that?</p> <p>15 A The Natural Resource Conservation Service.</p> <p>16 Q It is out of that document?</p> <p>17 A Yes. And the way that the Natural Resource</p> <p>18 Conservation Service functions is that they develop</p> <p>19 these standards at the national level. For</p> <p>20 instance, 590 is called nutrient management. And</p> <p>21 what they do is periodically at the national level</p> <p>22 they'll update those, and then they give the states</p> <p>23 the opportunity -- within one year of having the</p> <p>24 national standard, then the states either need to</p> <p>25 adopt that as it is or they can provide more</p>	<p style="text-align: right;">Page 1050</p> <p>1 Q So this is the document that sets the standard that</p> <p>2 informs the operator that their soil testing --</p> <p>3 that they need to respond to information in their</p> <p>4 soil testing?</p> <p>5 A I'll agree if I can define "standard" for myself.</p> <p>6 Q Oh, sure. I'm trying to connect this stuff up.</p> <p>7 A Targets, I guess that's what we're trying to do, is</p> <p>8 create targets.</p> <p>9 Q Okay.</p> <p>10 A Because, for instance, if you had -- well, what was</p> <p>11 brought up earlier in the week was this 30 parts</p> <p>12 per million nitrate. Well, what if my farm has 31,</p> <p>13 now what do I do, or if it has 29? So we tend to</p> <p>14 give ranges, realizing that there's variation out</p> <p>15 in the field, and then give specific guidance</p> <p>16 relating to those ranges.</p> <p>17 Q I think you've answered this, but the operator</p> <p>18 covered by this permit is going to need assistance</p> <p>19 or go to the conservation district and others to</p> <p>20 prepare the nutrient management plan?</p> <p>21 A Most people choose to do that because, as you can</p> <p>22 see by what's been presented this week, it's not a</p> <p>23 simple task. And the plans also have to be</p> <p>24 approved, and, you know, oftentimes different parts</p> <p>25 of those plans have to be -- for instance, there</p>